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RIGHT-OF-WAY PLAN PREPARATION

85-1.0 GENERAL

85-1.01 Purposes

The primary purposes of acquiring highway rights-of-way are to provide sufficient right-of-way to efficiently construct the facility, to enable the safe operation of vehicles on the facility after it is constructed, and to permit the satisfactory and efficient operation of maintenance equipment after construction.

When establishing the right-of-way, consideration should be given to the Land Acquisition Division's requirements for preparing legal descriptions of each acquisition or parcel, and in appraising the property and negotiating with the property owner. Further consideration should be given to the staking of the right-of-way and the Department's or property owners' problems in fencing the right-of-way.

85-1.02 Definitions

For definitions used in this Chapter, see the current version of the *INDOT Right-of-Way Engineering Procedures Manual* published by the Land Acquisition Division's Engineering Section. Please note the definitions listed below which are not included in the above-referenced manual:

1. Access Control Line. The access control line (ACL) is the line on which access is physically controlled for Limited Access Right-of-Way (L.A. R/W). The ACL is normally, but not always, the same as the L.A. R/W line along which access is controlled in a legal sense. See examples in Section 86-4.0.

2. Local Service Road. A local service road is a road constructed to a property that would not have other access because of the purchase of L.A. R/W or physical constraints.

3. Centerline. The centerline is a base line established in field survey by geometric computation (paper relocated line) or by computer generation and is used in the preparation of plans and in construction.

4. Chain Link Type Fence (CLTF). CLTF is a closely woven fence as shown in the INDOT *Standard Drawings* which is normally used to fence the L.A. R/W in urbanized areas or in front of developed properties with maintained lawns.

5. Control of Access. The rights of owners, occupants or other persons on land abutting a highway to access, light, air or view in connection with the highway are fully or partially controlled by a public authority. *Indiana Statutes* refer to this authority as limited access. However, the extent of control or limitation is defined as follows:

   a. Full Control. The control under which the authority to control access is exercised to give preference to through traffic by providing access connections to selected public roads only and by prohibiting crossings at grade or direct driveway connections.

   b. Partial Control. The authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings at grade and some driveway connections, as governed by existing conditions and economics in land acquisition and construction.

7. Construction Limits. The construction limits are the farthest limits of construction as measured perpendicular to a base line (e.g., toe of slope, top of ditch backslope). Construction limits should be shown throughout the plans.

8. Farm Field Type Fence (FFTF). FFTF is an open woven fence normally used to fence L.A. R/W in rural areas, but not in front of nearby rural dwellings or developed properties with maintained lawns.

9. Final Right-of-Way Plans. The right-of-way plans are considered to be final after the parcel numbers and other special right-of-way data have been added to the right-of-way plans by the Land Acquisition Division and have been signed by the Land Acquisition Division Chief.

10. Landlocked Property. A property is considered legally landlocked where it is left without access by the purchase of limited access right-of-way across its existing access or where a physical barrier (e.g., a high fill, stream channel relocation) has been constructed across its existing access or property frontage.

11. Limited Access Right-of-Way (L.A. R/W). See Item 5 above.

12. Monument, Type A, B, C or D. Standard monuments (markers) used to define the survey line, construction centerline, and civil boundaries and divisions.

13. Partial L.A. R/W. See Item 5 above.

14. Preliminary Right-of-Way Plans. Right-of-way plans are considered to be preliminary until such time as they are submitted to the Land Acquisition Division for approval.

15. Property Lines. Property lines outline or define property ownership.

16. Right-of-Way Lines. The proposed right-of-way lines outline or define the land requirements for a new highway project or the improvement of an existing highway facility.

85-1.03 Abbreviations

The following abbreviations should be used on right-of-way plans.

R/W	Right-of-Way
L.A. R/W	Limited Access Right-of-Way
A.C.L.	Access Control Line
C.L.T.F.	Chain Link Type Fence
F.F.T.F.	Farm Field Type Fence
APP. P.L.	Apparent Property Line
APP. EXIST R/W	Apparent Existing Right-of-Way
L.S.R.	Local Service Road
℄B	Beginning L.A. R/W
℄E	Ending L.A. R/W
N.E.P.L.	No Evidence of Property Line

85-1.04 Composition

A complete set of road right-of-way plans will include the sheets as follows:

1. Title Sheet,
2. Index Sheet,
3. Location Control Route Survey Plat
4. Plat No. 1 (if no Plat No. 3 is furnished),
5. Typical Sections,
6. Plan and Profile Sheets,
7. Detail Sheets (if required),
8. Approach Table, and

9. Plat No. 3, if no Plat No. 1.

A complete set of bridge right-of-way plans will include the following:

1. Title and Index Sheet,
2. Location Control Route Survey Plat,
3. Plat No. 1,
4. Typical Cross Sections,
5. Detail Sheets (if required),
6. Road Plan and Profile Sheets,
7. Layout,
8. General Plan, and
9. Bridge Summary.

All right-of-way plans should be on standard 841 mm x 594 mm sheets (A-1 size) except Plat No. 3 which is discussed in Section 85-2.10.

Include the right-of-way project number and right-of-way code on all right-of-way plan sheets (including the plan and profile sheets).

85-1.05 Sheet Numbering

The purpose of the right-of-way plans is to provide a set of maps and other drawings showing the area required for highway and associated purposes. There is no intention on the part of INDOT to make the right-of-way plans complete with the full construction details of any proposed facility, as this would duplicate the contents of another set of highway plans called the Construction Plans (see Chapter Fourteen). Right-of-way plans may show construction details, because they are typically developed using the construction plan sheets and parcel numbers added to construction plans. Right-of-way plans often contain fewer sheets than the construction plans for the same project and, consequently, are numbered differently.

The right-of-way plans often contain references to construction plan sheet numbers. Any of such references which are discordant with the right-of-way plan sheet numbers should be corrected to show right-of-way plan sheet numbers or omitted, whichever is appropriate for the conditions.

The aerial mosaic, Plat No. 3, if any, should be numbered as the last sheet of the right-of-way plans. Plat No. 3 may have its own numbering system noted in the title block in the lower-right corner.

Number all right-of-way plan sheets consecutively from the beginning to the end of the plans. The Title Sheet is sheet 1. If, after the sheets have been numbered, it becomes necessary to

insert additional sheets, the insertions can be made without re-numbering the original plan sheets by using letters. For example, two new sheets to be inserted between 17 and 18 would be the numbered 17A and 17B. Re-numbering is necessary, however, where a sheet is eliminated. The total number of sheets should not be shown.

85-1.06 State-Funded FHWA Oversight Exempt Projects and Non-NHS Projects

The State will not submit plans and other right-of-way data on State-funded FHWA oversight exempt projects or on non-NHS projects to the Federal Highway Administration. The delegated responsibility for such approval has been assumed by the State under its approval plan.

85-1.07 Location Surveys

Surveyors will not attempt to re-establish property lines from deeds. They will, however, review the last deeds of record to find references to property corner monumentation and attempt to collect all physical evidence of property lines that are available. Hedge rows or fence rows that appear to be property lines will be labeled App. P.L. When property line evidence cannot be found but where a property line is expected to exist, the survey will note this as N.E.P.L. Where section corners cannot be found, it will be noted as such in the survey documentation.

85-2.0 RIGHT-OF-WAY PLAN SHEETS

85-2.01 Title Sheet (Road Projects)/Title and Index Sheet (Bridge Projects)

The right-of-way Title Sheet should be similar to the Title Sheet for the construction plans and will include the following:

1. location map to scale;

2. project description (e.g., project type; location; civil township; county section, township, and range);

3. project reference numbers including designation number, Land Acquisition code number and reference point (Note that the Land Acquisition code number may be left off of the Preliminary R/W Plans, if it is unavailable. It must be shown on the Final R/W Plans.);

4. a signature block for the following:

a. the Land Acquisition Division Chief; and
b. the Right-of-Way Engineering Section Manager;

5. right-of-way index (bridge projects), see Figure 85-2B; and

6. revision table (bridge projects).

85-2.02 Index Sheet (Road Projects)

The Index Sheet will include the following:

1. a completed index (see Figure 85-2A, Sample Right-of-Way Index (Road Plans)),
2. a list of utilities,
3. an abbreviation legend,
4. any notes that could affect right-of-way purchasing, and
5. a revision table.

85-2.03 Parcel Listing for Land Acquisition

This sheet is no longer required in the plans.

85-2.04 Route Survey Plats

Location Control Route Survey Plats will be kept with survey materials for each project that requires additional right of way and will be submitted by the designer with Right-of-Way Plans. A print of the Location Control Route Survey Plat should be submitted with Preliminary Right-of-Way Plans. The mylar of the Location Control Route Survey Plat should be submitted with the Final Right-of-Way Plans.

1. In-House Developed Survey. The Location Control Route Survey Plats for an in-house developed survey will be transmitted to the Land Acquisition Division to be recorded, then transmitted back to the Design Division vault to be held until the project is assigned to a designer. Once assigned to a designer, the Location Control Route Survey Plat will be transmitted to the designer along with the survey and held by the designer until submittal of Right-of-Way Plans.

2. Open-End Contract Survey. The survey, when completed, along with the signed/sealed/recorded Location Control Route Survey Plat will be held in the Design Division vault until the project is assigned to a designer. Once assigned to a designer, the

Location Control Route Survey Plat will be transmitted to the designer along with the survey and held by the designer until submittal of Right-of-Way Plans.

3. Design-Consultant-Developed Survey. For a project where the survey is performed by the design consultant, the designer should submit the survey and the signed/sealed/recorded Location Control Route Survey Plat with Grade Review/Structure Size and Type Plans to be logged in and given a survey book number. Once logged in and numbered, the survey and Location Control Route Survey Plat will be returned to the designer. The Location Control Route Survey Plat will then be held by the designer until submittal of Right-of-Way Plans.

85-2.05 Plat No. 1

The Plat No. 1 is defined as a plan of a project showing the project centerline and the outline of all properties affected by the proposed construction. In addition to the property lines, Plat No. 1 should show all property owners, the proposed roadway, local service roads, interchanges, S-lines and landlocked properties. Plat No. 1 should not include the area of the various properties.

It is not necessary to include a Plat No. 1 in the right-of-way plans whenever a Plat No. 3 is furnished. For local public agency bridge projects, a Plat No. 1 need not be included in the plans. Where Plat No. 3 is not included in the right-of-way plans, Plat No. 1 must be included. Where Plat No. 1 is required, include it in the plans before the Typical Section Sheets.

The scale for Plat No. 1 must be determined for each individual project. In rural areas for long projects with large properties, a scale as small as 1:5000 may be used. For shorter projects, a scale of 1:2500 may be used. In urban areas, it may be necessary to show all or part of the Plat No. 1 on a scale of 1:1000.

It is important that all property outlines be clearly shown. For small compact properties or lots, it may be desirable to use a code system and tabulate the property owners elsewhere on the plat. Where properties are small and it is necessary to use a coding system to identify a property, do not refer to the properties as parcels. Instead, use the term "Index Number," as shown in Figure 85-2B$_1$, Plat No. 1 Property Owners Tabulation Example.

Figure 85-2C provides a check list for the information that should be included on Plat No. 1.

85-2.06 Typical Sections

Include all necessary typical sections for roadways in the project. These typically will include the mainline roadway, cross roads or streets, and local service roads.

85-2.07 Plan and Profile Sheets

85-2.07(01) Topography

Show all topographic information in the field survey books or model files on the Plan and Profile and the Interchange Right-of-Way Sheets. Plot all topography information 90 m on each side of the centerline with a 1:1000 scale and 45 m on each side of the centerline with a 1:500 scale. Note that stationing is shown at 100-m intervals. The Plan and Profile Sheets should include the following:

1. Topography. The topography should include the following:

    a. subdivision lot lines, apparent property lines, no evidence of property lines, property owners' names, centerline with stationing, bearings, equations, curve data, and apparent existing right-of-way;

    b. county lines and corporation limits;

    c. section and quarter-section line labeled as App. Section Line or App. ¼ Section Line;

    d. existing highways, streets and alleys with widths and names given;

    e. cemeteries, railroads, streams and ditches;

    f. private easements of access, if known;

    g. sewage disposal systems, utilities, tile drains, wells, lakes, right-of-way markers, corner stone, pipes, wood stakes, marks cut in concrete, brass plugs and other monuments;

    h. iron pins and other physical features which could represent property corners even if they are located outside the limits of the plan sheet;

    i. fence and fence corners;

    j. limits of woods, individual trees if noted during the survey;

    k. existing sidewalks, curbs, gutters, pavements and retaining walls;

l. private roads and entrances, including driveway type and material;

m. quarries, pits and mines;

n. springs, bridges and culverts;

o. fire hydrants, manholes, inlets, catch basins and vents;

p. peat bogs and muck areas; and

q. railroads and all other physical features which may affect the acquisition of right-of-way.

2. Stationing. Include the station and angles of intersection at all points where the project centerline and "S" lines cross centerlines of streets and highways, subdivision boundaries, section lines, quarter-section lines and county lines.

3. Distances. Include measured distances from the project centerline and "S" lines to property corners inside and nearest property corners outside the proposed right-of-way and block corners in subdivisions.

4. Closure. Ensure the computed alignment data for interchanges and paper relocations closes mathematically.

5. Property Corner Monuments. Reference the station and offset of existing property corner monuments located outside the limits of the plan sheet and show the App. P.L., if applicable.

6. Old Survey Lines. For original R/W established from old survey lines, include an equation and enough reference points to allow the Land Acquisition Division to re-establish the old R/W.

7. Descriptions. Include the section, civil township, congressional township and range, and name of county, subdivision lot numbers (not placed in circles) and north arrows, see Figure 85-2D, Example Description. Note that circled numbers on final right-of-way plans indicate parcel numbers. Ensure that conflicts with the construction plans are avoided.

85-2.07(02) Design Information

The following design information should be included on the Plan and Profile Sheets.

1. Paper Relocation Lines. If the R/W is referenced from paper relocation lines or master alignment strings, they must be tied to the survey line.

2. Construction Limits. Denote construction limits with dashed lines and label them "Construction Limits" for the entire length of the project including "S" lines. Also, show construction limits for driveways, long structures, channel changes, etc. Include and label temporary construction limits for temporary runarounds, where applicable.

3. Profiles. Include the profile of the existing surface along the project centerline and all "S" lines, with the proposed profile grade lines.

4. Access Lanes. Any design feature which limits access to or from the highway (raised median curb, removal of median curbs, etc.).

85-2.07(03) Property Lines

All existing property lines must be described as completely as practical. Where applicable, extend the property lines beyond the right-of-way line for ease in identification. Show the stationing and offset distances for property lines that parallel the survey line. Property lines that are not parallel to the survey line may be described by either of two methods as follows:

1. Describe one point on the apparent property line by giving a station and offset distance and a second point on the centerline by giving the range station.

2. Describe two points on the apparent property line by giving both stations and offset distances.

Method 2 is the preferred method.

The Plan and Profile sheets should include the following:

1. apparent property lines where evidence exists,
2. N.E.P.L. note at locations where property lines are suspected to exist, or
3. App. Existing R/W for existing R/W line if known from old plans or surveys.

If all attempts to determine the apparent existing R/W are unsuccessful, the Land Acquisition Division's Engineering Section's Records Unit should be consulted to provide the apparent existing R/W. If the Records Unit is unable to find evidence of existing R/W, then the

Engineering Section will prescribe the apparent existing R/W lines to be used. Requests for R/W determination should be sent to the Records Unit under the signature of the Design Division's section manager. Copies of the Plan and Profile Sheets should be included with the request. A copy of each request, without attachments, should be transmitted to the appropriate project manager for tracking.

85-2.07(04) Buildings and Other Improvements

Indicate the following on the Plan and Profile Sheets.

1. Buildings. Show the station and offset dimension of the nearest corner for all improvements within and 25 m beyond the right-of-way lines. In some special instances (e.g., in rural areas), it may be necessary to increase this dimension. Locate and show each structure containing an overhang which falls within the above limits. The amount of eave overhang should be shown at buildings located very close to, but not crossing, the new R/W.

2. Distances. Where the survey is an aerial survey, required or necessary data may be scaled from the aerial topography. However, note that aerial mosaics may not be uniformly to scale.

3. Additions. Where, during the Preliminary Field Check, it is determined that there are improvements (e.g., signs, underground tanks, encroachments) that were not noted by the original survey or included on the plans within or 25 m beyond the right-of-way lines, determine the station, offset dimensions and plan dimensions of the improvement and show the improvement on the plans.

4. Utilities. All utilities crossing or entering on the proposed right-of-way must be included in the plans. In the case of lines suspended on poles, show only the poles. However, for high-tension lines, show the line crossing.

   The correct inclusion of utility facilities should be reviewed by both the Design Division and its Utilities Section at the time of the field checks. Discrepancies in the plans should be called to everyone's attention at this time so that proper corrections can be made. Where a change is simply noted and revised later in the office, it is often too late to secure the necessary location data.

5. Existing Pipes. Existing pipes and their sizes and types should be shown on the plans.

85-2.07(05) Notations

The following should be noted on the plan and profile sheets.

1. Right-of-Way Note. On each plan and profile sheet, include the following notes as applicable:

   "All R/W described from Line '_____' except as shown."

   "Line '____' to be constructed." [only for multiple survey lines or a paper relocation]

   "Limited Access R/W provisions to apply where indicated." [only where limited access right-of-way is to be acquired]

2. Right-of-Way Description. Right-of-way should be described on each Plan and Profile Sheet as follows:

   a. Identification. Except as otherwise provided in Item f. below, each "break point" in the right-of-way line should be identified by a station and offset distance. Stations and/or offsets may be described in terms of property lines or right-of-way lines (e.g., +PL/30, +150/RW, +LARW/23, +PL/PL). All rights-of-way should be described from the clearly identified centerline, which should be the survey and/or construction centerline, wherever practical. In general, show the offsets in whole meter increments.

   b. Parallel. Where the right-of-way is parallel to the centerline between two "break points," it should be identified by using the offset distance (e.g., 25 m R/W). On curves, uniform right-of-way parallel to the curved centerline may be identified by using the offset distance between the PC and the PT. The PC and the PT on a curve should be labeled on the right-of-way line. See Section 85-4.02 for additional guidance.

   c. Non-Uniform. Non-uniform right-of-way should be marked simply "R/W" or "L.A. R/W" and be considered as straight lines between the break points, even where the centerline is curved.

   d. Clarity. Right-of-way lines and right-of-way notes should "stand out" and be easily seen and understood on all plan and profile sheets. For minimum line thickness and applicable R/W symbols, see Chapter Fifteen. Right-of-way lines should not obliterate physical features or notes that are important or necessary in the plan or topography presentation.

e. Common PL and R/W. Wherever a property line is intended to be the right-of-way line for the new project, the right-of-way line should be drawn coincident with the apparent property line. Designate the line either "P.L. & R/W" or "P.L. & L.A. R/W, A.C.L., & type of fence." Ensure that the existing property line and/or fence symbol is still labeled.

f. Right-of-Way Through Platted Areas. In platted areas, the exact right-of-way line locations should be dimensioned from property corners and not from the project centerline. A dimension at every lot line crossed is neither necessary nor desired. It is sufficient to make ties only at streets, alleys, or the platted area boundaries unless additional intermediate right-of-way break points are required. Figure 85-2E, R/W Through Platted Area, provides a sample layout. However, proper ties must be established between the platted area and the project centerline.

85-2.08 Detail Sheets

Detail sheets will be included in the right-of-way plans where right-of-way lines are shown on the sheet. They should show all right-of-way lines with dimensions and descriptions noted.

85-2.09 Approach Table Sheet

This sheet should show approach locations, type of approach, width, length, radii, type of materials but not quantities (X shown in appropriate space), and distance beyond the right-of-way line.

85-2.10 Plat No. 3

Plat No. 3, as required with preliminary right-of-way plans, will consist of one set of photographic reproduction mylars (914 mm x 610 mm) of the entire length of each right-of-way project. They should be prepared using a scale of 1:5000 in rural areas, and 1:1000 in urban areas from an uncontrolled aerial photo enlargement, with 10% overlap and with the error not to exceed 2%.

The mylar enlargements may be prepared from existing aerial photographs produced by a qualified aerial survey organization within the past three years, from new photography flown or upon the order of the designer specifically for the coverage required. Any of the photography, especially that of urban areas, should depict acceptable current conditions of civic, personal property or other improvement of the area involved, and provide acceptable quality of the

photographic image. Include all proposed photography with the right-of-way plans submittal to the Land Acquisition Division.

In case a property extends beyond the limits of a project, the designer should extend the aerial coverage and description to include the property.

In no event should the coverage of the reproduction mylars in the 610-mm dimension be less than 3000 m at the 1:5000 scale, nor less than 600 m at the 1:1000 scale.

The 3000-m mylar enlargements should be sufficiently matched and end lapped between successive sheets, so as to provide for a matched continuous strip of each right-of-way project when printed, trimmed and spliced together.

The reproduction mylars should include the following information.

1. Centerline. The centerline of the final selected surveyed route positioned approximately in the center of the 600-mm dimension. Include the centerline stationing and the curve radius on portions of the centerline which are on a curve. Include the north arrow on every sheet.

2. Property Lines. The boundary of the entire property ownership on both sides of the centerline and all property adjacent to or bisected by the centerline shown with a dashed line and designated with the letters "PL."

3. Right-of-Way Lines. The right-of-way line, as established, on both sides of centerline. Station and offset dimensions need not be shown.

4. Property Owners. The name of each property owner involved.

5. Section Corners. Any section corners falling within the coverage specified, on both sides of centerline, with all four sections indicated in a small circle.

6. Political Boundaries. Appropriate designation of county lines, State and county roads, streams and ditches.

7. Area. The area of the various properties should not be included.

8. Title Block. An appropriate title block in the lower right-hand corner of each reproduction, in a block approximately 75 mm x 125 mm, indicating the following:

    a. R/W Plat No. 3, for the Land Acquisition Division, Indiana Department of Transportation;

b. project number, designation number, and Land Acquisition Division code number;

c. aerial photo mosaic;

d. description of controlling termini of project;

e. mosaic scale of 1:2500, 1:5000 or 1:1000;

f. date and source of aerial photography used; and

g. sheet number of each reproduction with its relation to the total number of reproduction mylars involved. Also include the total number of sheets in the plans.

85-2.11 Check List

Figure 85-2F provides a check list which may be used to ensure the applicable information has been included on a set of right-of-plans.

85-3.0 PROCESSING RIGHT-OF-WAY PLANS

85-3.01 Preliminary Right-of-Way Plans

The preliminary right-of-way plans will be processed as discussed in Chapter Fourteen. The preliminary right-of-way plans are submitted to the Project Coordinator by the designer for subsequent transmittal to the Land Acquisition Division's Right-of-Way Engineering Section for their review and comments.

At the completion of Land Acquisition Division's review, the preliminary plans will be returned to the designer through the Project Coordinator. It is the responsibility of the designer in charge of the project to review the comments of the Land Acquisition Division and resolve any differences of opinion between their mark-up and the designer's intent.

85-3.02 Final Right-of-Way Plans

After the preliminary right-of-way plans have been found to be acceptable, a set of mylars of the final right-of-way plans and two sets of prints will be submitted by the designer to the Project

Coordinator. If the project was developed using CADD, include the CADD files with this submittal. For in-house projects, the designer will only submit one set of prints to the Project Coordinator. A memorandum will be prepared by the Project Coordinator and transmitted to the Design Division's Records Unit along with the mylars and prints for processing. The mylars and memorandum will be transmitted by the Records Unit to the Land Acquisition Division's Right-of-Way Engineering Section for their use. A transmittal letter will be prepared by the Records Unit and sent to the County Surveyor along with two sets of prints for review by the County Drainage Board. This submittal from the Design Division will not become complete Final Right-of-Way Plans until the parcel numbers and other special right-of-way data have been added and the plans have been signed by the Land Acquisition Division Chief.

When the designer receives the final right-of-way plans from the Land Acquisition Division, the designer should add the offset distances for right-of-way points. After submission of right-of-way plans, the designer is responsible for submitting all right-of-way revisions to INDOT as soon as possible. The Land Acquisition Division needs the current information so that it may proceed as follows:

1. prepare legal descriptions for the correct properties;

2. appraise the correct acquisitions; and

3. show the correct project features to the property owners.

If the designer needs access to, or needs a copy of, a Buyer's Report, the Design Division's Records Unit Supervisor should be contacted.

*** PRACTICE POINTER ***

The district construction engineer should always be consulted prior to letting a project with right-of-way clearance exceptions.

85-3.03 Revision of Approved Right-of-Way Plans

85-3.03(01) Right-of-Way Changes Initiated by the Design Division

1. Changes *Not* Requiring Land Acquisition Suspension. Any changes to the right of way or access (e.g., raised median curbs, removal of median crossovers, etc.), initiated by the

Design Division after the final right-of-way design plans have been processed, will require the following:

a. A memorandum to the Land Acquisition Division Chief from the designer through the Design Division Chief. This memorandum should contain a detailed explanation of the revision and why it was necessary.

b. A set of prints of the revised sheets.

This type of revision is submitted to the Land Acquisition Division through the Design Division's Records Unit.

2. Changes *Requiring* Land Acquisition Suspension. If a major design change or scope change is identified that will result in a right-of-way revision, the designer should send a memorandum to the Land Acquisition Division requesting that the right-of-way acquisition for the project, or for specific parcels, be temporarily suspended. The design change should generally involve three or more parcels, or 10% of the total number of parcels, in order for the entire project's right-of-way acquisition to be suspended. For design changes affecting only one or two parcels, the memorandum should indicate that right-of-way acquisition be suspended only on such parcels.

Figure 85-3A is the memorandum form for partial suspension. Figure 85-3B is the memorandum form for complete suspension.

The Land Acquisition Division should also be notified in writing when the issues causing the delay have been resolved and right-of-way acquisition may resume. Such notification may be included in the transmittal memorandum accompanying the revised right-of-way plans.

85-3.03(02) Right-of-Way Changes Initiated by the Land Acquisition Division

Any changes to the right of way, initiated by the Land Acquisition Division after the final right-of-way design plans have been processed, will require the following:

1. The Land Acquisition Division will verbally request the Designer to review a proposed change.

2. The Designer will verbally advise the Land Acquisition Division of his or her position regarding the request.

3. Once the request has been reviewed and approved, the Land Acquisition Division will send a memorandum to the designer authorizing a change to plans, with a copy to the Project Coordinator. The Land Acquisition Division will establish a reasonable due date for the submission and communicate it to the designer in the memorandum.

4. The designer revises the plans in accordance with the Land Acquisition Division's memorandum.

    a. If the designer is a consultant, go to Step 5.

    b. If the designer is in house, go to Step 7.

5. The designer submits revised plan sheet(s), along with a copy of the of the Land Acquisition Division's request, to the Design Division's project coordinator. The project coordinator forwards the submission to the reviewer.

6. The reviewer checks the submission in accordance with the Limited Review policy.

    a. If acceptable, the reviewer transmits the revised plan sheet(s) along with a copy of the Land Acquisition Division's request to the project coordinator. Go to Step 7.

    b. If not acceptable, the designer sends a letter through the project coordinator to the consultant. The consultant should resolve the matter and resubmit.

7. One copy of the revised plan sheet(s), along with a copy of the of Land Acquisition Division's request, is distributed by the project coordinator as follows:

    a. the author of the of Land Acquisition Division memo who requested the change;

    b. the Land Acquisition Division's Right-of-Way Engineering Section manager; and

    c. the project manager for consultant projects, or the designer for in-house projects.

    Note: A copy of the correspondence only is sent to the Land Acquisition Division's Buying Section manager.

85-3.04 Construction Changes

Any right-of-way changes made after a project is let and awarded must be processed as a construction change. Construction changes are processed as discussed in Section 14-1.02.

85-4.0 RIGHT-OF-WAY DESIGN

85-4.01 Widths

85-4.01(01) Interstate Routes

Right-of-way widths for Interstate routes are based on a desirable minimum clear width of 5 m between the construction limits and the right-of-way line. For construction beyond the right-of-way limits, see Section 85-5.0.

85-4.01(02) Non-Interstate Routes (Except County Roads)

The minimum right-of-way widths for non-Interstate facilities are based on a desirable clear width of 3 m between the construction limits and the right-of-way line. Right-of-way widths less than desirable are permissible at specific locations based on engineering judgment. Less than desirable right-of-way widths should only be used where the cost of normal right-of-way is prohibitive or physical features control such as those encountered in urban areas.

For construction beyond the right-of-way limits, see Section 85-5.0.

85-4.01(03) County Roads (Local Transportation Projects)

County road right-of-way requirements are based on providing a minimum desirable clear distance of 1 m between the construction limits and the right-of-way line.

85-4.02 Design Considerations

When determining right-of-way limits, the designer should consider the following:

1. Minimizing Number of Break Points. Except as otherwise required below, the number of right-of-way break points should be kept to a minimum.

2. Right-of-Way Break on Property Lines. A change in the distance from the centerline to the right-of-way line should not occur on a property line if there is a taking from both properties involved. However, if it is impractical to place the break point approximately

6 m from the property line, the point should be placed exactly on the property line. The break point should not be placed in or near stream beds, rivers, etc.

3. Right-of-Way Around Curves. Wherever the right-of-way line is on a curve, the right-of-way should be parallel to the centerline. Nearby improvements or other conditions may justify using straight line chords.

4. Abrupt Changes in the Right-of-Way Line. Abrupt changes in the right-of-way lines should be avoided. The maximum desirable rate of change is 1.5 m laterally for each 30 m along the centerline. This low rate of change may not, however, be practical in rough terrain or in certain special situations. This will reduce the number of right-of-way markers or corner posts for fencing, and will reduce the maintenance cost of the fence.

5. The End of Right-of-Way Taking Terminal Parcel. Where adjacent construction projects end within the limits of a particular property, each project must show the complete right-of-way requirements across the property in question, both on the plan sheets and on the aerial mosaics (Plat No. 3) and/or Plat No. 1.

6. Variable Median. The right-of-way should only be described from one survey centerline for variable median roadways wherever practical. For wide medians (60 m), it may be necessary to describe the right-of-way from two centerlines.

7. Hatching of Residues. Note landlocked residues by the use of hatching on Plat No. 3 or Plat No. 1.

8. Construction Limits. Show the construction limits for all areas of the project where construction is planned in order to establish the right-of-way requirements for the project.

9. Equations. Do not describe one right-of-way point from two centerlines.

10. Break Points. Avoid R/W breaks where the break points cannot be staked (e.g., in a stream or driveway).

11. Small Parcels. Additional right-of-way break points and short distances between breaks should be considered when such a procedure will eliminate a taking (parcel) or will avoid leaving a small remnant.

12. Cemeteries. In conformance with *Indiana Statutes*, Department-maintained routes are required to be a minimum of 30.5 m from the nearest grave site wherein burial rights have been transferred or a mausoleum in such cemeteries. Right-of-way or temporary right-of-way can be taken from a cemetery with the consent of the cemetery owners, governing board or relatives of interred people. However, avoidance of any right-of-way

taking from a cemetery is advisable because of the substantial administrative burden and because the contractor could be enjoined from building a road on cemetery property upon the complaint of any person. Where a small cemetery is affected, relocation of the cemetery may be an acceptable mitigation strategy.

85-5.0 ALTERNATE RIGHTS-OF-WAY

85-5.01 Temporary Right-of-Way

Temporary right-of-way should be specified wherever there is a definite time limit on the State's need for the use of the land. Various conditions under which temporary right-of-way will be required are discussed in the following sections.

85-5.01(01) Driveway Construction

Temporary right of way is not always warranted for driveway construction. If no permanent right of way is required from a property owner, temporary right-of-way takes from that property should be avoided if possible. This is in an effort to reduce the number of parcels on a project.

1. When to Consider Temporary Right of Way for Drive Construction. Temporary right of way for drive construction should be considered where any of the criteria exist as follows:

    a. the proposed drive grade and vertical curve required to construct the drive tie-in extends beyond the permanent right-of-way line. Generally, the drive grade should not exceed the grade shown on the INDOT *Standard Drawing*s;

    b. if any type of right of way is required from a property for other work, the drive should be paved to the right-of-way line and the necessary temporary right of way for drive construction should be acquired;

    c. the drive pavement is in need of replacement to the right-of-way line, or a different drive pavement material than that in place must be used;

    d. if the proposed drive is wider than the existing drive, it is preferred to place the tapers outside the permanent right of way as shown on the INDOT *Standard Drawings*; or

    e. revising the drainage causes grading work outside the permanent right of way.

2. When Not to Consider Temporary Right of Way for Drive Construction. Temporary right of way for drive construction should not be considered in the situations as follows:

   a. the proposed drive grade and vertical curve required to construct the driveway tie-in are short of the permanent right-of-way line, and the existing pavement beyond the tie-in point may remain in place. Paving should stop at the drive tie-in point, or within 1.5 m of the right-of-way line, whichever is farther from the roadway; or

   b. for a partial 3R project, a 1-m wide HMA wedge is placed adjacent to the mainline or shoulder pavement. Therefore, no temporary right of way will be required. See *Indiana Design Manual* Section 56-4.05(02).

Construction limits for drives should be shown on the plans within the temporary right of way. Excessive temporary right of way should not be taken outside of the construction limits. The minimum distance from the construction limits to the temporary right-of-way line is 1.5 m. This distance could vary depending on the individual situation. Features such as trees, wells, septic systems, planters, gardens, signs, lamp posts, etc., may appear within the temporary right-of-way limits. If such features are within the temporary right of way and are not to be removed, they should be identified on the plans as not to be disturbed.

> ** *PRACTICE POINTER* **
>
> Where it is necessary for complete construction of a driveway to extend outside the normal right-of-way, the necessary temporary right-of-way for construction of the driveway should be shown on the plans and labeled as such.

85-5.01(02) Improvement Removal

Where improvement removal is required, the designer should consider the following:

1. Wherever it is necessary to go outside the normal right-of-way to complete the removal of an improvement through which the R/W lines pass, show the necessary temporary right-of-way for the removal on the plans (see Item 3 below).

2. Temporary right-of-way will be provided for the removal of all improvements that encroach on the proposed right-of-way, but are also partially located outside the taking

(see Item 3 below). Temporary right-of-way will not be required to remove an encroachment where the existing right-of-way is adequate and there is no other right-of-way acquisition. The property owner will be required to remove encroachments of this nature.

Temporary right-of-way can be established only for the removal of partial encroachments upon rights-of-way to be acquired. The removal of partial or complete illegal encroachments upon existing rights-of-way acquired on previous projects, with no encroachment upon any new rights-of-way, is the responsibility of the owners of the encroaching improvements. Therefore, no temporary rights-of-way are required.

Temporary right-of-way cannot be acquired from an owner for the removal of an adjoining owner's improvement. If an improvement is on or extends over the property line, the Land Acquisition Division should be consulted.

3. The parts of an encroaching building, including signs, which lie outside of the permanent right-of-way must be embraced by temporary rights-of-way having limits which are about 6 m from any part of the building or sign. Where practicable, the perimeter of temporary right-of-way for building removal will be a four-sided figure formed by two parallel lines (one of which is the designed right-of-way line) and by two lines perpendicular to the centerline. The distance between this temporary right-of-way line and the extremities of the building involved may exceed 6 m in some cases for the purpose of convenience. Exceptions to the 6-m distance will occur where the distance from the building in question to the boundary of the property involved is less than 6 m. In this case, the temporary right-of-way line should follow the property line. Furthermore, the 6-m distance must be waived where it will embrace a portion of a second building which is situated wholly on the abutting owners residue and should not be removed.

   In platted lots, the above described method of designing the quadrilateral should be disregarded if the four bounding lines can be made parallel with lot lines to enable the use of descriptions "By Parallel Lines." For example, such a description may read, "The north 7.315 m of the south 14.935 m of the west 12.497 m of Lot 29 in Smith's Addition …. ," which is a perimeter type meets and bounds description and furnishes an easy means of identifying the land and is easier to compose.

85-5.01(03) Unsuitable Materials

The following discusses where temporary right-of-way may be required for unsuitable materials.

1. Peat Removal. Wherever the normal right-of-way is not sufficient to provide for disposal of peat, temporary right-of-way may be taken for this purpose.

2. Other Materials. Unsatisfactory foundation soils other than peat are normally disposed of as "Unsuitable Material" and temporary right-of-way is typically not provided for this disposal. Where the quantities of unsatisfactory foundation soils are of the magnitude that it is desirable to provide temporary right-of-way adjacent to the proposed facility, the plans must clearly state the nature of the soils to be disposed of on the temporary right-of-way.

3. Disposal. Temporary right-of-way for the deposit of soils to be wasted as in Items 1 and 2 above should normally be computed on the basis of depositing the waste soil 1 m deep.

85-5.01(04) Grading as Excavation on Temporary Right-of-Way

Whenever temporary right-of-way will not be returned to its original condition, this fact must be clearly shown on the plans. Where material from the temporary right-of-way is to be used in the roadway fill, a note to this effect must be shown (e.g., 120 m^3 of excavation from channel change to be used in roadway fill).

85-5.01(05) Concrete Slab Removal

Do not include temporary right-of-way for concrete slab removal where the slab can be sawed along the permanent right-of-way line.

85-5.01(06) Describing Temporary Right-of-Way

Wherever temporary right-of-way is required, clearly define on the plans the purpose for which the temporary right-of-way is being taken.

85-5.01(07) Permanent Construction

Permanent construction for highway purposes may not be placed on temporary right-of-way. Right-of-way must be acquired for this purpose. It should be noted, however, that an exception may be made to this rule for grading in a residential area where shallow cuts or fills are involved.

Temporary right-of-way for yard grading may be specified for up to 0.6 m difference in elevation. Otherwise, permanent right of way should generally be purchased. Exceptions to this method of establishing right of way should be used upon the recommendation of the Land Acquisition Division with the concurrence of the property owner.

85-5.01(08) Restriction on Temporary R/W for Driveway Construction

Temporary right-of-way cannot be acquired from one owner to construct an adjoining owner's driveway. If the driveway cannot be relocated entirely upon the adjoining owner's property, right-of-way should be acquired.

85-5.02 Provisional Right-of-Way

Whenever there is a continuing need (no definite time limit) for entrance onto a property outside the normal right-of-way line, the area so required will be taken as provisional right-of-way. Provisional right-of-way must be clearly shown on the plans and the purpose for which it is being taken clearly indicated (e.g., Provisional Right-of-Way to Limit Line-of-Sight Obstructions).

In establishing provisional right-of-way, the designer should keep in mind that provisional right-of-way cannot be condemned. Wherever provisional rights-of-way cannot be acquired through negotiated purchase or gift, the fee simple title will need to be secured by condemnation and the right-of-way is permanent.

85-5.03 Perpetual Easement for Off-Highway Construction

Where an off-highway sewer, ditch, drain, or any other permanent item is to be constructed and subsequently maintained by the State, and it is not necessary or desirable to acquire the fee simple title to the right-of-way, the plans will call for the acquisition of a "Perpetual Easement for _____."

The relocation of legal ditches or legal pipe drains requires the acquisition of perpetual easements so that the county can maintain the portions of the ditches or pipe drains outside the permanent right-of-way limits.

The amount of legal ditch/pipe drain-usable easement/highway right of way overlap will vary from 0 where right-of-way costs are minimal, to a maximum where extensive damages are

indicated. The amount of overlap should be discussed on the field check. Right-of-way markers will not be required for delineation of a perpetual easement.

This design should be incorporated into applicable Right-of-Way Plans not yet submitted to the Land Acquisition Division. Revisions to such plans now in review by the Land Acquisition Division should be made per their request.

85-6.0 FIELD CHECKS

85-6.01 Purpose

Field checks of the project are held during preparation of design plans, at which time the proposed right-of-way may be reviewed. In some instances, particularly in urban areas where there are a large number of right-of-way decisions to be made, field checks of the design project may be held specifically for right-of-way review.

85-6.02 Types of Inspections

The following describes the right-of-way field inspections that may occur.

1. Preliminary Field Check. Right-of-way requirements are a primary consideration at the Preliminary Field Check. Access provisions on limited access facilities should be resolved at this time as discussed in Chapter Eighty-six. The Preliminary Field Check Plans which are provided to the Division of Land Acquisition for use at the field checks must be prepared showing a right-of-way line.

2. Final Field Check (If Required). Right-of-way requirements should be shown in complete detail on the Final Field Check Plans. At the time of the Final Field Check, these right-of-way requirements are to be reviewed by the members of the field check party and either revised or approved.

A Land Acquisition Division representative should be present at both the Preliminary and Final Field Checks to consult with the designer regarding right-of-way impacts. In addition, the Land Acquisition Division representative should be encouraged to make an independent review of the plans, not only from a right-of-way viewpoint, but also in anticipation of appraising and buying problems.

85-7.0 REINFORCED CONCRETE RIGHT-OF-WAY MARKERS

85-7.01 Specifications

Reinforced concrete right-of-way markers are to conform to the dimensions shown in the INDOT *Standard Drawings*. In addition, they should comply with the current INDOT *Standard Specifications.*

85.7.02 Warrants

Reinforced concrete right-of-way markers are used to define the right-of-way for all of the following:

1. Routes within the State system including Interstate roadways.

2. That portion of county roads and city or town streets where right-of-way is purchased by the State to permit reconstruction of a portion of the local road even though the local road and the right-of-way may be subsequently abandoned to the local agency.

3. Local service roads where the State is purchasing the right-of-way on a new location but intends to subsequently abandon the right-of-way and the local service road to the local agency.

4. County-Federal Aid Routes.

Right-of-way markers may be eliminated in highly urbanized areas where recommended or approved by the appropriate district office.

85-7.03 Placement

The back faces of the markers should be set on the right-of-way lines approximately 300 m apart. Markers should also be included as follows:

1. at all corners and/or angle points of irregular-shaped right-of-way lines;

2. opposite each PC and PT of curves on both right-of-way lines;

3. 150 m (maximum) apart on both the inside and outside of all curves; and

4. where, at any given marker, the adjacent marker on that line is visible assuming an eye level of 1500 mm at the intermediate marker.

The location of right-of-way markers will be shown on the plans. These locations will also be tabulated in a table showing station and offset and designated as "Right" or "Left" of the centerline.

85-7.04 Fence as Right-of-Way Marker

The following will apply to fencing and right-of-way markers.

1. No right-of-way marker is required where the plans provide for a fence on the Limited Access Right-of-Way Line (L.A. R/W).

2. Where the L.A. R/W is not fenced, markers should be provided as set out in Section 85-7.03.

3. Where a fenced L.A. R/W line ends and ordinary R/W begins, the end fence post should be considered as a right-of-way marker in determining the placement of the first reinforced concrete right-of-way marker.

4. No corner or angle point should be artificially introduced so as to require a marker at less than the normal distance after a fence post at the end of L.A. R/W.

85-7.05 Resetting Right-of-Way Markers

At one of the design field checks, the Design Division representatives should, in cooperation with the district representative, determine if there are existing right-of-way markers that should be reset. The number of new markers plus the number of markers to be reset should equal the total number of markers required on the project.

85-7.06 Basis of Payment

Pay items will be in accordance with the INDOT *Standard Specifications* as follows:

1. Right-of-way markers to be furnished and set by the contractor will be estimated as EACH and the pay item will be Right-of-Way Marker.

2. Right-of-way markers to be reset by the contractor will be estimated as EACH and the pay item will be Right-of-Way Marker, Reset.